

Table 2. Characteristics of trees used by roosting bald eagles within the Dead Dog Creek stand.

Tree Species	# Identified	Avg. dbh cm (in.)	Avg. age (yrs.)	Avg. height m (ft.)	# Alive	# Dead tops	# Dead	Avg. crown shape
Douglas-fir	26	95.0 (37.4)	172	31.4 (103.0)	18	3	5	3.4
Ponderosa pine	9	92.5 (36.4)	177	26.0 (85.2)	2	3	4	4.2

### Surveys of Foraging Areas

A total of 15 surveys of known foraging areas were conducted during the winter of 1997-1998, and a total of 15 surveys of known foraging areas were conducted during the winter of 1998-1999. During both winters, eagles were most numerous on Lucky Peak and Arrowrock Reservoirs during surveys of foraging areas, and least numerous in the desert south of Boise ([click here to view Figures 18, 19](#)). We recorded an average of 17.6 and 17.2 bald eagles on all surveys of foraging areas combined during the 1997-1998 and 1998-1999 winters, respectively ([click here to view Figures 20, 21](#)).

### Reservoir Foraging Areas

We recorded an average of 11.0 and 8.2 bald eagles per weekly survey on Lucky Peak and Arrowrock Reservoirs combined during the 1997-1998 and 1998-1999 winters, respectively ([click here to view Figures 20, 21](#)). During the first winter of the study, eagle numbers on the reservoirs peaked during mid-December 1997, and then again during mid-January through early February 1998 ([click here to view Figure 18](#)). Similarly, during the second year of the study, eagle numbers peaked during late December 1998, and again during mid-February 1999 ([click here to view Figure 19](#)). During the 1997-1998 winter, 48 percent of all eagles observed on reservoir foraging areas were adults, and 50 percent were immatures ([click here to view Figure 22](#)). During the 1998-1999 winter, 59 percent of all eagles observed on reservoir foraging areas were adults, and 39 percent were immatures ([click here to view Figure 23](#)). The majority of eagles encountered during reservoir surveys were associated with carcasses of winter-killed big game. Large concentrations of eagles were observed regularly in the More's Creek arm of Lucky Peak Reservoir, and at the upper end of Arrowrock Reservoir near Cottonwood Creek. Small concentrations of eagles also were common throughout the winter near Trail Creek on Arrowrock Reservoir. In these areas, deer carcasses were available to feeding eagles throughout much of the winter. Throughout both winters of the study, golden eagles were also commonly observed during reservoir surveys.

### Foothills Foraging Areas

We recorded an average of 0.8 and 2.7 bald eagles per weekly survey at foothills carcass feeding areas during the 1997-1998 and 1998-1999 winters, respectively ([click here to view Figures 20, 21](#)). Eagles were more numerous at foothills feeding areas during the second year of the study than during the first. During the 1997-1998 winter, 33 percent of all bald eagles observed at foothills foraging areas were adults, and 50 percent were immatures ([click here to view Figure](#)

22). During the 1998-1999 winter, 45 percent of all bald eagles observed at foothills foraging areas were adults, and 55 percent were immatures (click here to view Figure 23). During the first winter of the study, 17 percent of all bald eagles observed at foothills foraging areas were of unknown age due to poor visibility during periods of inclement weather (click here to view Figure 22). Golden eagles also were commonly observed at foothills foraging areas throughout both winters of the study. Road-killed deer carcasses were placed in foothills foraging areas by Idaho Department of Fish and Game personnel approximately twice per week (Jerry Scholten, IDFG, pers. comm.). This continual supply of carrion attracted both bald and golden eagles. More golden eagles were observed at foothills foraging areas than bald eagles during the 1997-1998 winter. During the first winter of the study, bald eagles were counted most often at foothills foraging areas during the first part of the winter, and were not recorded there after 21 January 1998 (click here to view Figure 18). During the second year of the study, bald eagles were counted most often at foothills foraging areas during early January 1999 (click here to view Figure 19).

#### Desert Foraging Areas

We recorded an average of 0.7 and 1.0 bald eagles per weekly survey of desert foraging areas during the 1997-1998 and 1998-1999 winters, respectively (click here to view Figures 20, 21). During the 1997-1998 winter, 91 percent of bald eagles observed in desert foraging areas were adults, and 9 percent were immatures (click here to view Figure 22). During the 1998-1999 winter, 71 percent of bald eagles observed in desert foraging areas were adults, and 14 percent were immatures (click here to view Figure 23). During both winters of the study, bald eagles were observed most often near IBP during surveys of desert foraging areas. At IBP, large concentrations of wintering waterfowl likely attracted eagles. In past winters, eagles regularly fed on wastes from IBP butchering processes that were spread on nearby agricultural fields as fertilizer. During past winters, concentrations of 10-20 eagles were observed near the plant. Recent changes in plant operation, however, have curtailed the practice of fertilizing nearby fields with butcher waste, likely contributing to low numbers of eagles recorded there during this study. Bald eagles also were recorded at Black's Creek Reservoir, and along Pleasant Valley and Gowen Roads. During both winters of the study, bald eagle sightings in desert foraging areas increased during late February and early March (click here to view Figures 18, 19). Eagles were observed at this time mainly along Pleasant Valley and Gowen Roads. It is suspected that eagles were foraging on ground squirrels which were plentiful during this period.

#### Boise River Surveys

We recorded an average of 5.1 and 5.3 bald eagles per weekly foraging survey of the Boise River during the 1997-1998 and 1998-1999 winters, respectively (click here to view Figures 20, 21). During the 1997-1998 winter, 90 percent of bald eagles observed on the Boise River during foraging area surveys were adults, and 10 percent were immatures (click here to view Figure 22). During the 1998-1999 winter, 81 percent of bald eagles observed on the Boise River during foraging area surveys were adults, and 19 percent were immatures (click here to view Figure 23). During surveys of the Boise River, bald eagles were observed in Barber Pool upstream from Eckert Road, the canyon between Diversion Dam and Lucky Peak Dam, and near Lucky Peak

Dam, and downstream from downstream from Eckert Road in Barber Park, between Barber Park and Broadway Avenue (several different perches), near the Red Lion Riverside Hotel, and in the vicinity of Heron Hollow and Lake Harbor (see Kaltenecker et al. 1994). More bald eagles were counted downstream from Eckert road during the 1998-1999 winter than during the previous winter. During the second year of the study, numbers of bald eagles counted on the Boise River declined markedly after river flows increased during mid-February 1999.

## **DISCUSSION AND FUTURE STUDY**

### **Barber Pool Communal Roost**

Use of Barber Pool by roosting bald eagles declined during the 1997-1998 winter compared to the previous two winters. Numbers of roosting eagles at Barber Pool increased slightly during the second winter of the study, but were still below the long-term average. We recorded the fewest eagles roosting in Barber Pool during the 1994-1995 winter ([click here to view Figure 5](#)). It is unknown if the decrease in eagle use over the past three winters represents a declining trend, or normal fluctuations in wintering eagle numbers. Yearly fluctuations in bald eagle wintering populations are a normal occurrence and can be caused by the availability of open water, food, or general weather conditions (Steenhof 1978). Use of bald eagle communal roosts also is likely dependant upon availability of open water, food, or weather conditions (Stalmaster 1976, Steenhof 1976, Krauss 1977, Kiester and Anthony 1983, Stalmaster 1987).

As during past seasons, we found that eagle numbers at Barber Pool were inversely correlated with ambient temperatures at higher elevations within the Boise River Drainage. Weather conditions at Idaho City were likely representative of those affecting eagles wintering at higher elevations within the Boise River Drainage or other nearby river systems. Colder temperatures and adverse weather conditions apparently concentrated eagles at lower elevations such as Barber Pool. Data from this study and from Spahr (1990) suggest that numbers of eagles roosting in Barber Pool increase as ambient temperatures decrease.

The past 3-4 winters have been mild in southwest Idaho. Mild temperatures have resulted in presence of open water and lack of snow cover throughout southwest Idaho, especially within the Boise River Drainage. Mild weather conditions likely caused wintering eagles to disperse. Both Midwinter Eagle Counts and surveys of foraging areas conducted during this study indicate that many eagles were present on Lucky Peak and Arrowrock Reservoirs during the past two winters. Eagles were not concentrated at lower elevations such as the Boise River, likely resulting in lower use of Barber Pool for communal roosting.

We documented a significant change in roosting behavior at Barber Pool during the two winters of this study. During the first winter of the study, eagles began using a new subroost east of the river channel on lands owned by Oliver Gregerson. Use of the Barber Pool subroost declined compared to previous winters, and we documented no eagle use of the Canal subroost. During the second winter of the study, use of the Barber Pool subroost continued to decline, and eagles used the new Gregerson subroost almost exclusively. It is unknown why eagles have changed

roosting locations within Barber Pool. It could be argued that eagles moved roost locations farther from disturbances at Surprise Valley. It should be noted, however, that a decline in use of the Canal subroost began prior to initiation of the Surprise Valley development. Additionally, the Gregerson subroost is closer to human disturbances at the Gregerson residence and on the Greenbelt pathway than the Barber Pool subroost. We recorded regular human activity on the Gregerson property in the vicinity of roosting eagles. Eagles were apparently unaffected by nearby pedestrian and vehicle traffic on the Gregerson property.

It is recommended that Barber Pool roost surveys be continued for at least one more winter to fully document eagle use of the area through and after completion of nearby development projects. By the end of the 1999-2000 winter, the Surprise Valley development project should be fully completed. It is unknown how development or associated human disturbances might affect bald eagle use of the area. Potential increases in human traffic within Barber Pool could result from developments. Any increase in human activity within Barber Pool could adversely affect eagle use of the area.

As a result of this monitoring project, good data exist on bald eagle use of Barber Pool from winters both previous to and during construction projects. The most useful scientific and practical information to obtain would be pre-, during-, and post-development use of the area by eagles. At least one more winter of data need be collected to complete this scenario. It may be argued that monitoring should continue beyond next winter to document potential changes in eagle use which may lag behind completion of development projects. Lish and Lewis (1975) found that eagles abandoned a roost after a nearby housing development was completed at Grand Lake, Oklahoma. Because areas surrounding Barber Pool are changing so rapidly, it is critical that roost monitoring continue to discern normal fluctuations in use from downward trends that may be related to development.

Future roost monitoring should follow methods outlined in this report. Surveys should begin no later than early December and continue through mid- to late March. At least three surveys should be conducted per week, each approximately three hours in duration. The south side of the river provides the best view of the Canal, Barber, and Gregerson subroosts. Observers should end each survey by driving to the north side of the river to obtain an accurate count of eagles in the Barber Pool and Gregerson subroosts, and to scan cottonwoods near Eckert Road.

Products anticipated from continued roost monitoring at Barber Pool should include yearly progress reports and publishing of final results in a peer-reviewed scientific journal. The publication should present scientific analysis of results from this study, showing the long-term effects of nearby development on bald eagle use of a communal roost site. Graphics in the publication should include GIS maps produced by COMPA showing changes in human population densities near Barber Pool both before and during the study. The publication also should provide a detailed review of current literature on the subject, and implications for management and monitoring of bald eagles, human disturbance, and urban development near roost sites. Preparation of the publication should take place after collection of sufficient post-treatment data.

### **Dead Dog Creek Communal Roost**

The Dead Dog Creek Communal Roost was used regularly by bald eagles throughout both winters of this study. Results from roost counts at Dead Dog Creek were comparable to preliminary surveys conducted during the 1996-1997 winter (Kaltenecker 1997). Eagle numbers at Dead Dog Creek were less variable throughout both winters of this study than at Barber Pool (click here to view Figures 4, 13). We found no obvious relationship between counts of eagles at the Barber Pool Communal Roost and the Dead Dog Creek Communal Roost (click here to view Figures 4, 13). During both years of this study, when roost counts at Dead Dog Creek declined during mid-winter, we recorded no significant increase in numbers of eagles roosting at Barber Pool. Likewise, when roost counts peaked at Dead Dog Creek, roost counts at Barber Pool were not correspondingly low.

We described important stand characteristics at the Dead Dog Creek Communal Roost. Our results agree with other authors who have described characteristics of other communal roosts in the Pacific Northwest. Roost stands generally contain the largest, most open-grown trees in the surrounding area (Kiester and Anthony 1983). Bald eagle roost trees are generally taller than trees in the surrounding stand, and snags and dead-topped trees are often preferred (Kiester and Anthony 1983). In addition to the characteristics of trees within the Dead Dog Creek stand, slope, aspect, and topography of the area create ideal conditions for roosting by providing protection from harsh weather conditions, an important feature of bald eagle communal roost sites (Steenhof 1980). Both subroosts within the Dead Dog Creek stand were located near the creek bottom in micro-sites which likely provided good thermal cover and protection from winds. Density of understory trees likely contributed to thermal cover within both the upper and lower subroosts.

Many authors have suggested management of bald eagle roosts in the West to maintain stand conditions preferred by roosting eagles (Kiester and Anthony 1983, Dellasala et al. 1998). Authors have stressed the need to maintain large trees within multi-layered stands (Anthony et al. 1982). Timber management should enhance desirable conditions for communal roosting, and clear-cutting or harvest of larger trees should be avoided (Kiester and Anthony 1983). Commercial timber harvest has recently occurred near the Dead Dog Creek Communal Roost on state and private lands. These logging operations have occurred within the Deer Creek, Schoonover Gulch, and Robie Creek Drainages, and have likely adversely affected potential bald eagle roosting habitat. In these areas, logging has removed the majority of overstory trees, shown to be preferred by roosting eagles in the Dead Dog Creek roost stand. Due to high erosion potential of the Ola-Searles soils and the steepness of slopes where they occur, these sites are often difficult to regenerate after logging or other major disturbances (Collet 1980). In the Deer Creek Drainage, numerous examples of increased erosion were visible in areas which were logged and roaded in the recent past.

We identified no need for active timber management within the Dead Dog Creek Communal Roost. Presently, stand conditions create ideal bald eagle roosting habitat. We found no overcrowding of trees within the stand, or conversion to less desirable tree species as shown by

Dellasala et al. (1998) in the Klamath Basin. Natural thinning is presently occurring among understory trees within the Dead Dog Creek stand. Recent forest pathogen outbreaks have killed numerous small patches of understory trees, and a natural defoliator is killing the tops of understory trees throughout the stand. These dead-topped trees should provide for adequate numbers of suitable future roost trees. Old-growth remnant trees within the Dead Dog Creek stand are healthy, and contain minimal rot. Remnants are not being lost to blowdown at a high rate, and sufficient numbers should remain until understory trees reach maturity. We recommend no active management of the Dead Dog Creek Communal Roost to maintain or change stand conditions for roosting bald eagles. We feel that current stand conditions are sufficient to maintain characteristics preferred by roosting bald eagles.

Authors also have suggested management of stands to reduce the risk of catastrophic fire (Dellasala et al. 1998). In many areas, modern fire-suppression policies have created conditions conducive to stand-replacing wildfire due to the buildup of fuels and the presence of fuel ladders caused by high densities of small trees (Dellasala et al. 1998). In many areas, commercial thinning and prescribed burns have been used to reduce the threat of catastrophic fire in bald eagle habitat (USDI 1988). Recent wildfires in the Boise area including the 1992 Foothills fire and the 1995 8th Street fire have shown that timber stands within the Boise River Drainage are at high risk of catastrophic burn. Undoubtedly, the Dead Dog Creek roost stand also is at risk of wildfire. However, we feel that the stand is at risk of catastrophic fire more because of slope, aspect, and summer moisture conditions than from excess fuels. We found that fuels from downed and dead timber within the stand were low, and fuels from brush were only moderate. Because we found little regeneration of conifers within the stand, ladder fuels from small or suppressed trees also were low. We recommend that fuel levels within the stand be monitored over time. If fuels from brush continue to increase, future thinning with prescribed fire or other means should be considered, but are not necessary at this time. Such management actions should be agreed upon by all management agencies involved, and should be conducted by agency specialists. Care should be taken during any prescribed burn to protect roost trees and potential roost trees by removing fuels from around their bases (Dellasala et al. 1998).

To maintain current roosting conditions within the stand, we recommend that the Dead Dog Creek Communal Roost be considered highest priority for fire suppression. Wildfire within Dead Dog Creek would likely reduce the usefulness of the area to roosting eagles by reducing potential roost sites and changing thermal characteristics of the stand. It must be pointed out, however, that past wildfires created current conditions within the stand which are optimum for roosting eagles. Wildfire would certainly change short-term usefulness of the stand to roosting bald eagles, but may help to create or maintain the characteristics preferred by roosting eagles over the long-term.

We recorded no human disturbances to bald eagles within the Dead Dog Creek Communal Roost. The literature suggests that eagles are most susceptible to disturbance in roost areas during winter. Sabine and Klimstra (1985) recommended that roost areas in southern Illinois should be closed to the public. Buehler et al. (1991) found that none of the roost sites in the Chesapeake

Bay area of Maryland were in areas of human disturbance. Sabine (1987) suggested that human access to eagle roost areas in Rush Valley, Utah, be restricted. Hansen (1978) found eagles to be tolerant of people at roost sites, but few people disturbed roosts in his study. The Pacific Bald Eagle Recovery Plan (USFWS 1986) stipulates that there should be a 400 m (1,312 ft.) buffer zone established around eagle roost areas during their periods of use.

We identified no major conflicts from human disturbances at the Dead Dog Creek Communal Roost. The roost was located in a remote, roadless area, and we recorded no human activity near the roost during surveys. Eagles appeared tolerant of observers' presence during surveys, and we observed no adverse impacts to eagles from observers during surveys. Nonetheless, we suggest that all measures possible be taken by management agencies to maintain low levels of human activity near the Dead Dog Creek Communal Roost. The roost should not be promoted as a wildlife viewing opportunity, and human access to the roost area should be discouraged. No new roads or trails should be built in the Dead Dog Creek Drainage, and existing roads and trails should remain closed to public travel during winter months. Snowmobile travel near the roost site also should be restricted. Future roost monitoring at Dead Dog Creek is likely not necessary in the near future, but management agencies should consider routine monitoring of eagle use at this site every 5-10 years. Future monitoring should follow methods established during this study.

### **Foraging Areas**

Surveys of foraging areas were conducted to provide an estimate of total eagle numbers wintering in the local area, and to show how eagle use of specific roosts was related to abundance and proximity of food sources. We found that the total number of eagles recorded during surveys of foraging areas was comparable to the total number of eagles recorded at the Dead Dog Creek and Barber Pool Communal Roosts. This indicates that the majority of eagles recorded during surveys of foraging areas likely roosted in one of the communal roosts monitored during this study. An important factor of bald eagle communal roosts is their close proximity to reliable food sources. Bald eagles usually roost in suitable forest stands which are as close as possible to feeding areas (Hansen et al. 1980, Kiester and Anthony 1983, Isaacs et al. 1993, Isaacs et al. 1996). Depending on wintering area, eagles roost from <1-24 km (<0.6-15 mi.) away from feeding areas (Edwards 1969, Hansen et al. 1980, Kiester and Anthony 1983).

We found the greatest concentrations of foraging eagles on Lucky Peak and Arrowrock Reservoirs. The largest groups of feeding eagles were observed within the More's Creek arm of Lucky Peak Reservoir, only 1-2 km (0.6-1.2 mi.) from the Dead Dog Creek Communal Roost. Eagles observed within reservoir foraging areas were generally associated with carcasses of winter-killed deer. Individual carcasses were temporary food sources, and were used by eagles for no more than two weeks. However, carcasses were commonly found throughout the winter near the reservoirs, providing a reliable food source for eagles. Our results agree with those of Kaltenecker and Bechard (1995) who found that bald eagles commonly fed on deer carcasses throughout the upper Boise River Drainage. We found that numbers of eagles recorded during surveys of reservoir foraging areas were similar to numbers of eagles using the Dead Dog Creek Communal Roost ([click here to view Figures 24, 25](#)). Approximately 50 percent of eagles

observed within reservoir foraging areas were immatures, similar to age ratios of eagles recorded using the Dead Dog Creek Communal Roost ([click here to view Figures 26, 27](#)).

We found bald eagle use of foothills foraging areas to be variable. The number of bald eagles recorded during surveys at this foraging area was dependant upon the number and condition of carcasses. Carcasses at foothills foraging areas did not last long, as they also were scavenged heavily by golden eagles, ravens (*Corvus corax*), magpies (*Pica pica*), coyotes (*Canis latrans*), and other mammals. More golden eagles were recorded using carcasses at this foraging area than bald eagles. Perhaps golden eagles excluded bald eagles from feeding on carcasses. Bald eagle use of this foraging area was not consistent during the first winter of this study. During this first winter, they were observed feeding there only during December 1997 and January 1998. Eagle use of this foraging area was more consistent during the second winter of the study. Bald eagles were seldom recorded at foothills feeding areas after 1 February, even though carcasses were present for the remainder of the winter. During both winters of the study, over 50 percent of the bald eagles observed at foothills foraging areas were immatures, similar to the Dead Dog Creek Communal Roost ([click here to view Figures 26, 27](#)). We suggest that the majority of eagles roosting at Dead Dog Creek made daily foraging flights to Lucky Peak and Arrowrock Reservoirs or to foothills foraging areas.

We recorded 5.1 and 5.3 bald eagles per survey of Boise River foraging areas during both years of this study ([click here to view Figures 20, 21](#)). This corresponds closely to the number of bald eagles using the Barber Pool Communal Roost ([click here to view Figures 28, 29](#)). It is likely that the majority of eagles recorded in Boise River foraging areas roosted nightly at Barber Pool. Age ratios of eagles counted during foraging area surveys on the Boise River were similar to those identified at the Barber Pool Communal Roost ([click here to view Figures 30, 31](#)). We suggest that the majority of eagles roosting at Barber Pool made daily foraging flights to the Boise River or desert foraging areas.

We recorded the least number of bald eagles during surveys of desert foraging areas ([click here to view Figures 18, 19](#)). Recent changes in operation at the IBP plant have apparently adversely affected eagle use of the area. Butcher wastes are no longer spread on nearby agricultural fields, and eagles are no longer attracted to the area in large numbers. The only eagles recorded near the IBP plant during surveys were associated with concentrations of feeding or roosting waterfowl. The majority of eagles recorded during surveys of desert foraging areas were adults, similar to age ratios of eagles using the Barber Pool Communal Roost ([click here to view Figures 30, 31](#)). Desert foraging areas are closest to the Barber Pool Communal Roost, and it is likely that eagles foraging in desert areas roosted at Barber Pool. A decline in eagle use of desert foraging areas due to changes in IBP plant operation could have contributed to lower numbers of eagles roosting at Barber Pool.

During early spring, we recorded numerous eagles dispersed throughout desert areas, likely feeding on ground squirrels which had recently surfaced from winter hibernation ([click here to view Figures 18, 19](#)). This feeding behavior is likely common during early spring, and has been



described by other authors (Kiestler et al. 1987).

## **MANAGEMENT RECOMMENDATIONS FOR THE DEAD DOG CREEK COMMUNAL ROOST**

One objective of this report is to provide recommendations to the public agencies involved for management of the Dead Dog Creek Communal Roost. These recommendations are designed to ensure the continued use of Dead Dog Creek or other suitable or potential habitats by bald eagles for communal roosting throughout the short- and long-term future.

### Objective 1

Give the Dead Dog Creek Communal Roost long-term protective status to ensure its continued protection and management for roosting bald eagles by the administering federal agencies.

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#### Issue

The Dead Dog Creek Communal Roost is a critical wildlife habitat area that requires special protection and management to maintain conditions preferred by roosting bald eagles throughout the short- and long-term future.

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#### Actions

1. Retain the Dead Dog Creek Communal Roost within the federal public lands system. Do not consider the area for land exchange or disposal to any state or private entity.

2. Designate the portion of the Dead Dog Creek Communal Roost administered by the U.S. Bureau of Land Management as an Area of Critical Environmental Concern (ACEC) to afford it the status, protection, and management concern of this designation.

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3. Amend the Boise National Forest Plan so that the portion of the Dead Dog Creek Communal Roost administered by the U.S. Forest Service is designated an Area of Special Environmental Interest, and is given the status, protection, and management concern of this designation.

### Objective 2

Identify and manage other suitable or potential habitats for bald eagle communal roosting.

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#### Issue

The Dead Dog Creek Communal Roost is vulnerable to stand-replacing wildfire. Agencies should identify, protect, and manage other suitable stands as replacement habitats should the Dead Dog Creek stand be lost to fire and become unsuitable for bald eagle communal roosting.

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### Actions

1. Identify all timber stands on public and private lands within 3.3 km (2 mi.) of the main Boise River Corridor or its impoundments that have characteristics similar to the Dead Dog Creek Communal Roost in terms of slope, aspect, topography, density of trees, and understory vegetation. Important consideration should be given to the numbers and densities of overstory trees as they were shown to be preferred by roosting eagles at Dead Dog Creek. Timber stands which are not presently suitable but which could be actively managed to create suitable roosting conditions also should be considered.
2. Retain potential habitats identified on federal public lands. Lands containing suitable roosting habitats should not be considered for exchange or disposal to any state or private entities.
3. Designate potential habitats identified on lands administered by the U.S. Bureau of Land Management as an Areas of Critical Environmental Concern (ACEC) to afford them the status, protection, and management concern of this designation.
4. Amend the Boise National Forest Plan so that potential habitats identified on lands administered by the U.S. Forest Service are designated Areas of Special Environmental Interest, and are given the status, protection, and management concern of this designation.
5. Attempt to acquire and place under federal management those potential habitats identified on private lands through land exchange or other means.
6. Follow all recommendations made in this document for management of potential roost habitats with regard to timber harvest, monitoring of fire potential, fire suppression, and human activity.

### Objective 3

Maintain suitable stand characteristics of the Dead Dog Creek Communal Roost.

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### Issue

The Dead Dog Creek timber stand contains considerable merchantable timber in both overstory and understory trees. Overstory trees were used exclusively by roosting bald eagles. Understory trees likely contributed to thermal properties conducive to bald eagle communal roosting. Any harvest of timber within the Dead Dog Creek stand could adversely affect its use by roosting bald eagles. Timber harvest should not be necessary to maintain roost stand characteristics preferred by bald eagles in the future.

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#### Actions

1. No commercial harvest of timber should occur within the Dead Dog Creek Drainage.
2. No commercial harvest of timber should occur within potential roost habitats unless it is deemed necessary to create or maintain stand characteristics preferred by roosting bald eagles.

#### Objective 4

Prevent catastrophic, stand-replacing wildfire within the Dead Dog Creek Communal Roost.

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#### Issue

Topography and summer moisture conditions at the Dead Dog Creek site make it susceptible to stand-replacing wildfire. Recent wildfires have shown that timber stands on the Boise Front are at high risk of catastrophic fire. Even though historic fires created optimum present conditions at Dead Dog Creek for bald eagle communal roosting, a catastrophic fire would likely render the stand useless to roosting bald eagles for many decades. Without suitable replacement roosting habitat, winter use of the Boise River Drainage by bald eagles could be significantly reduced if the Dead Dog Creek stand were lost to fire. Land management agencies should reduce the risk of catastrophic fire at the Dead Dog Creek Communal Roost.

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#### Actions

1. Dead Dog Creek and all surrounding drainages should be highest priority for agency fire suppression. It should be understood among all agency fire crews (BLM, USFS, and State of Idaho) that these areas are highest priority for fire suppression.
2. Monitor fuels by agency fire specialists within the immediate future at Dead Dog Creek to establish a baseline of information on current fuel load and fire potential. Fuel levels should be assessed for their potential to carry fire to the upper canopy.
3. Routinely (every 5-10 years) monitor fuels within the stand for fire potential throughout the long-term future.
4. If fuel levels reach hazardous levels, thinning of underbrush and ladder fuels with prescribed fire should be considered. Prescribed fire should only be attempted during cool periods of the year, and should be conducted by agency specialists. Large crews should be used to maintain control of the burn, and care should be taken near overstory and co-dominant trees to remove underbrush and other fuels from their bases to minimize mortality to these trees.

## Objective 5

Maintain low levels of human activity near the Dead Dog Creek Communal Roost.

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### Issue

Bald eagles are most susceptible to human disturbance in roost areas during winter. Increased human activity near or within the Dead Dog Creek Communal Roost during winter could jeopardize its continued use by roosting bald eagles. Agencies to attempt to maintain low levels of human disturbance near the Dead Dog Creek Communal Roost. Human access to the roost area should be discouraged.

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### Actions

1. Do not promote the Dead Dog Creek Communal Roost as an opportunity for public wildlife viewing or publicize its exact location. Ample opportunities exist for viewing of eagles and public education within foraging areas or in urban areas.
2. Allow no new roads or trails within Dead Dog Creek or the surrounding drainages.
3. Maintain seasonal closures of existing roads within Dead Dog Creek or the surrounding drainages.
4. Snowmobile travel on roads or trails within Dead Dog Creek or the surrounding drainages should be restricted from 1 December-15 March.

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